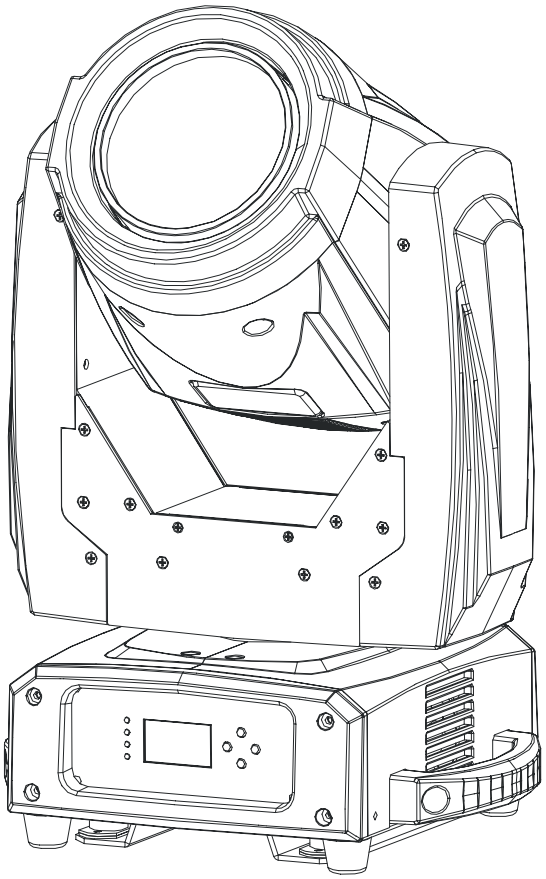
SABER

SPEED



AE-710BEAM

User Manual

Please read the instruction carefully before use

TABLE OF CONTENTS

1. Safety Instruction 2
2. Technical Specification.....4
3. Description 5
3.1 Control Panel 5
4. Gobo and Lamp 6
4.1 Gobo 6
4.2 Lamp 7
4.3 Change the Lamp 7
5. How To Set The Unit 9
5.1 Main Function 9
5.2 Home Position Adjustment.....19
5.3 Error Information.....21
6. Control By Universal DMX Controller 22
6.1 Connection 22
6.2 Channel Mode Setting 23
6.3 Address Setting 23
6.4 DMX 512 Configuration 24
7. Troubleshooting.....27
8. Maintenance and Cleaning.....29

1. Safety Instruction

WARNING

Please read carefully the instruction manual, which includes important information about the installation, usage and maintenance.

Please keep this User Guide for future consultation. If you sell the unit to another user, be sure that they also receive this instruction manual.

Important:

Damages caused by the disregard of this user manual are not subject to warranty. The dealer will not accept liability for any resulting defects or problems.

- Unpack and check carefully that there is no transportation damage before using the unit.
- The unit is for indoor use only. Use only in a dry location.
- Do install and operate by qualified operator.
- Do not allow children to operate the fixture.
- Use safety chain when fixing the unit. Handle the unit by carrying its base instead of head only.
- The unit must be installed in a location with adequate ventilation, at least 50cm from adjacent surfaces.
- Be sure that no ventilation slots are blocked; otherwise the unit will be overheated.
- Before operating, ensure that the voltage and frequency of power supply matches the power requirements of the unit.
- It's important to ground the yellow/green conductor to earth in order to avoid electric shock.
- Maximum ambient temperature TA: 40℃. Don't operate it when the temperature is higher.
- Don't connect the device to any dimmer pack.
- During initial start-up some smoke or smell may arise. This is a normal process and does not necessarily mean that the device is defective, and it will decrease gradually within 15 minutes.
- Make sure there are no flammable materials close to the unit while operating to avoid fire hazard.
- Examine the power wires carefully; replace them immediately if there is any damage.
- Unit's surface temperature may reach up to 85℃. Don't touch the housing bare-handed during its operation, and allow about 15 minutes for cooling the unit down before replacing bulb or maintenance as it could be very hot.
- Avoid any inflammable liquids, water or metal objects entering the unit. Once it happens, cut off the mains power immediately.

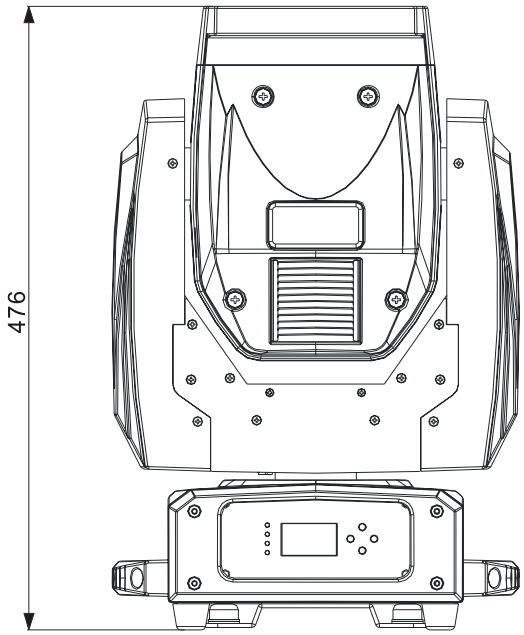
- Do not operate in dirty or dusty environment; do clean the fixture regularly.
- Do not touch any wire during operation as there might be a hazard of electric shock.
- Avoid power wires twist other cables.
- The minimum distance between light output and the illuminated surface must be more than 12 meters.
- Disconnect mains power before fuse/lamp replacement or servicing.
- Replace fuse/lamp only with the same type.
- In the event of serious operating problem, stop using the unit immediately.
- Never turn on and off the unit time after time.
- The housing, the lenses, or the ultraviolet filter must be replaced if they are visibly damaged.
- Do not open the unit as there are no user serviceable parts inside.
- Never try to repair the unit by yourself. Repairs carried out by unskilled people can lead to damage or malfunction. Please contact the nearest authorized technical assistance center if needed.
- Disconnect the mains power if the fixture is has not been used for a long time.
- Do use the original packing materials before transporting it once again.
- To prevent or reduce the risk of electrical shock or fire, do not expose the unit to rain or moisture.
- Hot lamp explosion hazard. Do not open the unit within 15 minutes after switching off.
- Do replace the bulb once it is damaged, deformed or life-expired.
- Do not look directly at the light while the bulb is on.
- Never touch bulb with bare fingers, as it is very hot after using.
- Do not start on the unit without bulb enclosure or when housing is damaged.

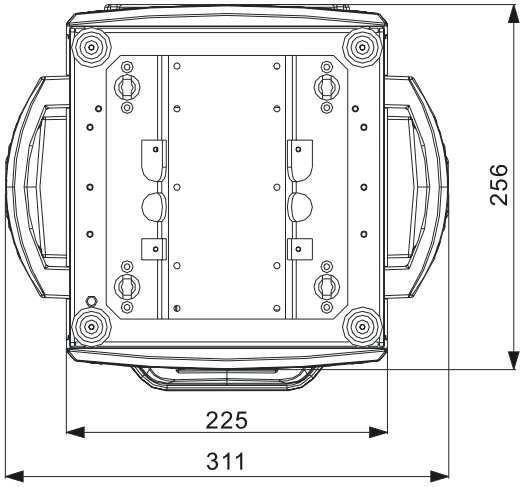
For 230V 50Hz power supply, maximum fixtures that can be connected on one power cable is 10;
For 120V 60Hz power supply, maximum fixtures that can be connected on one power cable is 5;

2. Technical Specification

- DMX Channels: 14&16 channels
- Smooth 0~100% dimming and variable strobe speeds
- Motorized focus by DMX control
- Automatic Pan/Tilt position correction
- Excellent ventilation, ensuring reliable operation

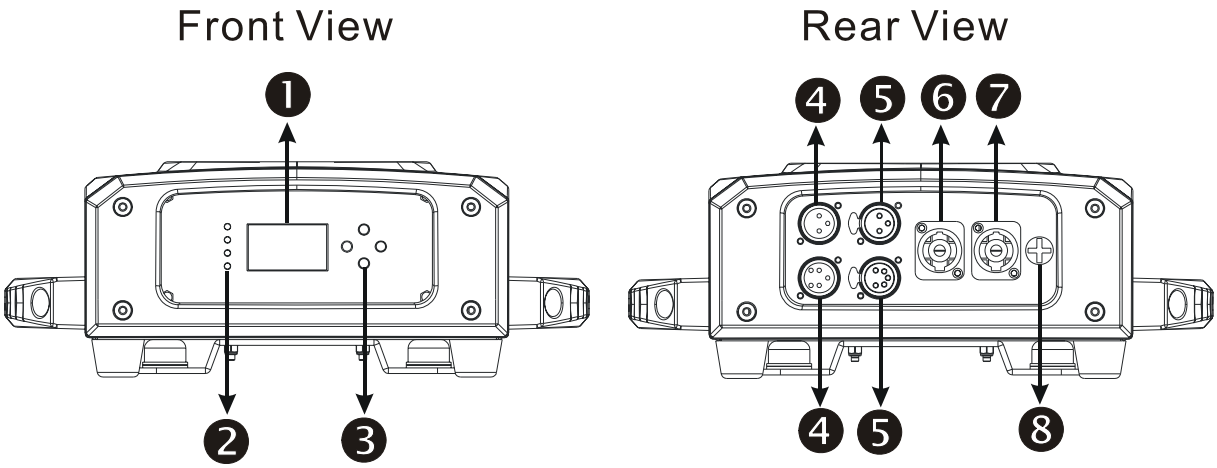
- **Voltage:** AC 100~240V, 50/60Hz
- **Power Consumption:** 250W
- **Lamp:** PHILIPS MSD Platinum 2R, about 6000hrs
- **Beam Angle:** 3°
- **Dimension:** 311 x 256 x 476mm
- **Weight:** 15Kgs





3. Description

3.1 Control Panel



1. Display:

Show the various menus and the selected functions;

2. LED:

POWER	On	Power On
DMX	On	DMX input present

3. Button:

MENU	To enter into, move backward or leave the menu
▲	Move up in the menu
▼	Move down in the menu
ENTER	Enter the desired functions

4. DMX IN:

For DMX 512 operation, use 3/5-pin XLR plug cable to link the units together;

5. DMX OUT:

For DMX 512 operation, use 3/5-pin XLR plug cable to link the units together

6. POWER IN:

For connection to a socket (100~240V, 50/60Hz) via the supplied mains cable.

7. POWER OUT:

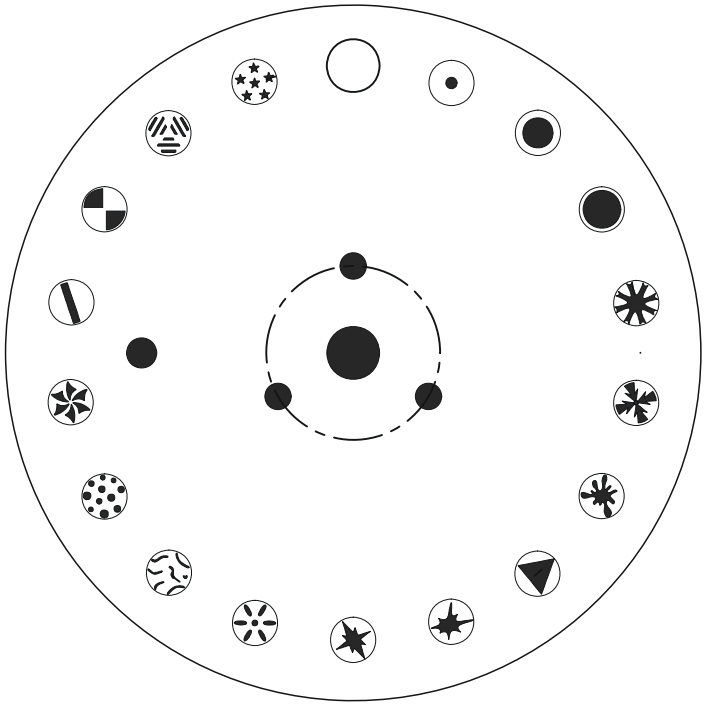
Connect to supply power to the next unit.

8. Fuse (T 6.3 A):

Protect the unit from damage of over current.

4. Gobo and Lamp

4.1 Gobo



DANGER!

Install/change the gobo-wheel with the device switched off only.

4.2 Lamp

Philips MSD Platinum 2R

- Because of its high internal pressure, there might be a risk that the Discharge lamp would explode during operation. The lamp emits intense UV radiation which is harmful to the eyes and skin. The high luminance of the arc can cause severe damage to the retina if you take a close look at the lamp.
- To protect the lamp, always turn off the lamp first (via control panel or DMX controller) and let the unit run at least five minutes to cool down before switching off the mains supply. Never handle the lamp or luminary when it is hot.
- Do not touch the bulb with bare hands. If this happens, clean the lamp with denatured alcohol and wipe it with a lint free cloth before installation.
- The lamp generates UV radiation. Never operate the lamp without appropriate shielding.
- When lighting up, the lamp operates at high pressure and there is a slight risk of arc tube rupture. The risk increases with age, temperature and improper handling of the lamp. Do not use the lamp longer than its lifespan.
- Make sure the lamp is located in the center of the reflector for the best projection.

4.3 Change the Lamp

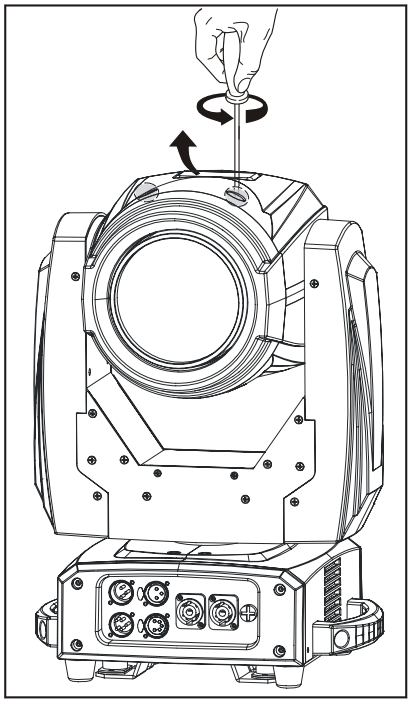


Fig.1 Use 1⁄4 Turn to loosen the four screws and open the cover.

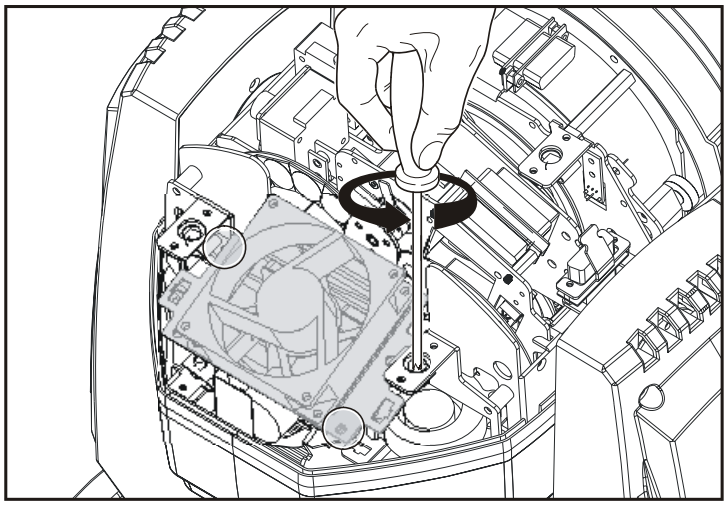


Fig.2 Use 1⁄4 Turn loosen the screws and take out the fan.

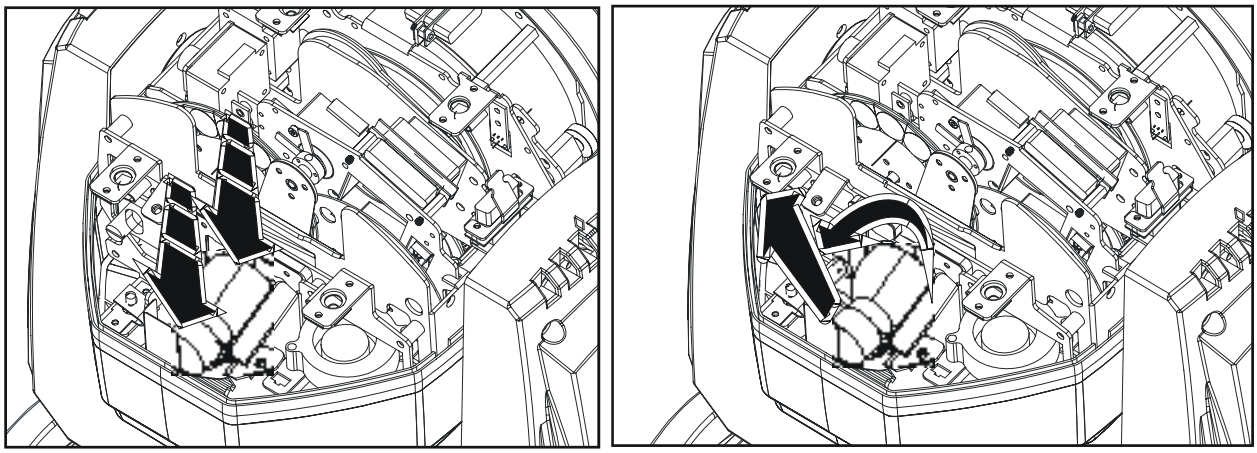


Fig.3 Take away the old lamp.

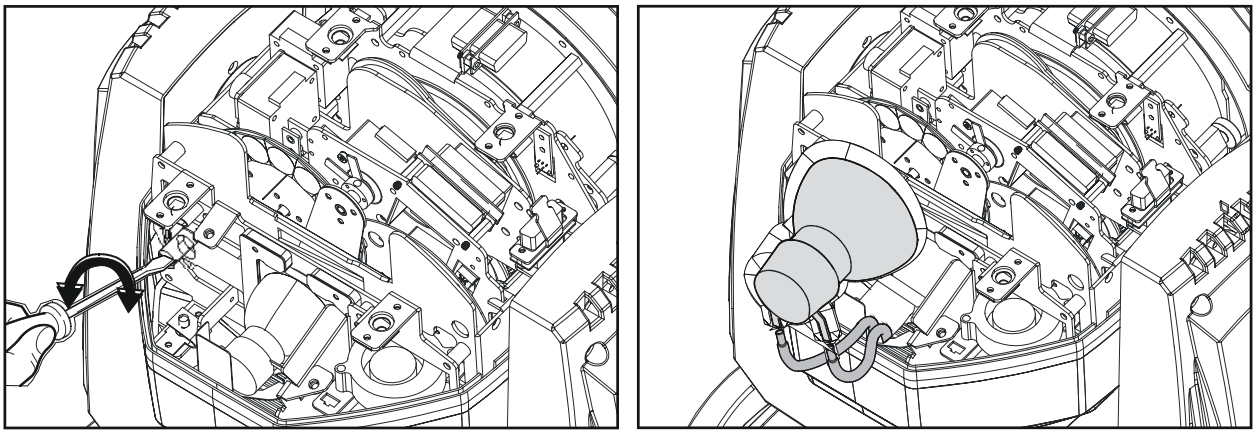


Fig.4 Unplug all the connect wires over the lamp and wear anti-static gloves to take on the lamp. And then change a new lamp.

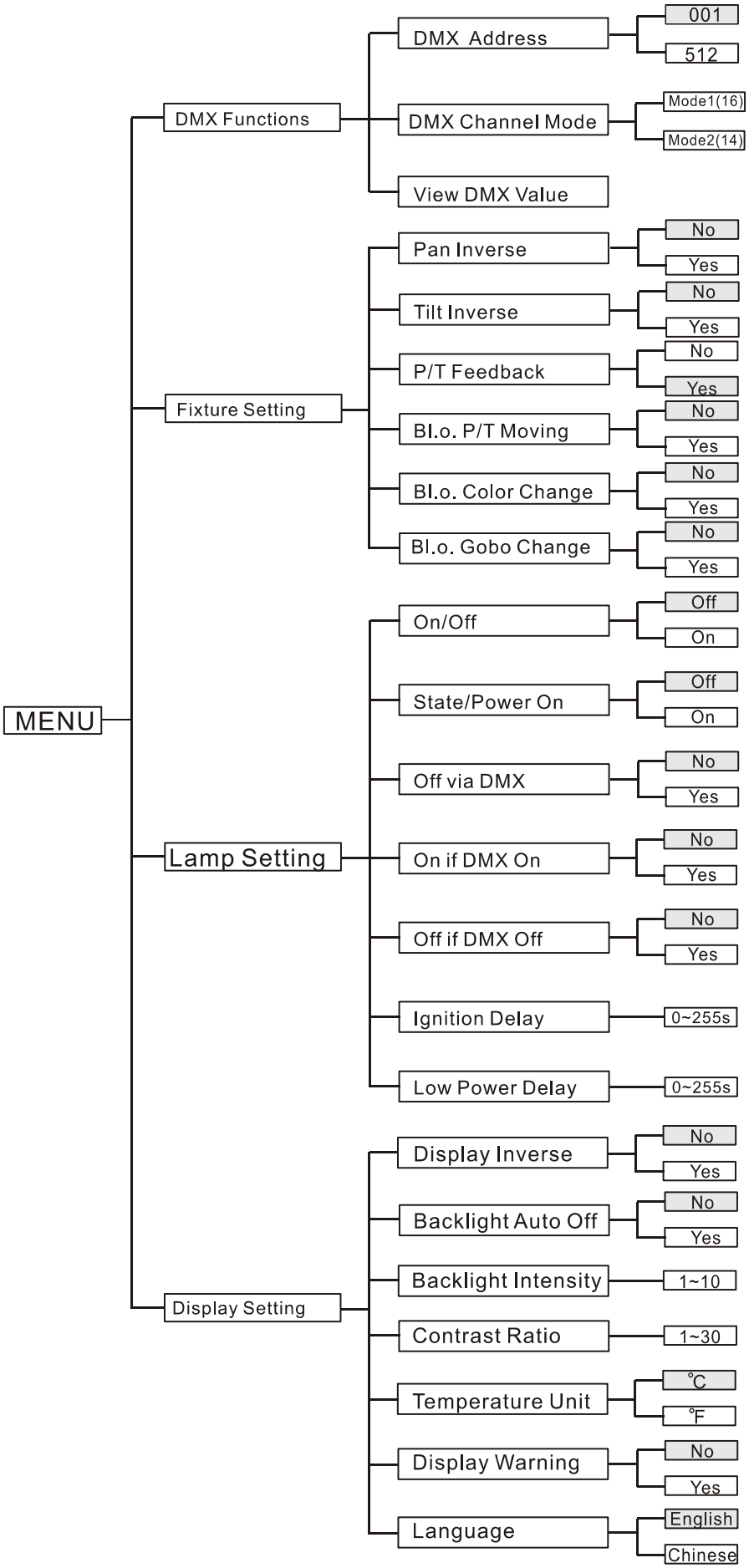
5. How To Set The Unit

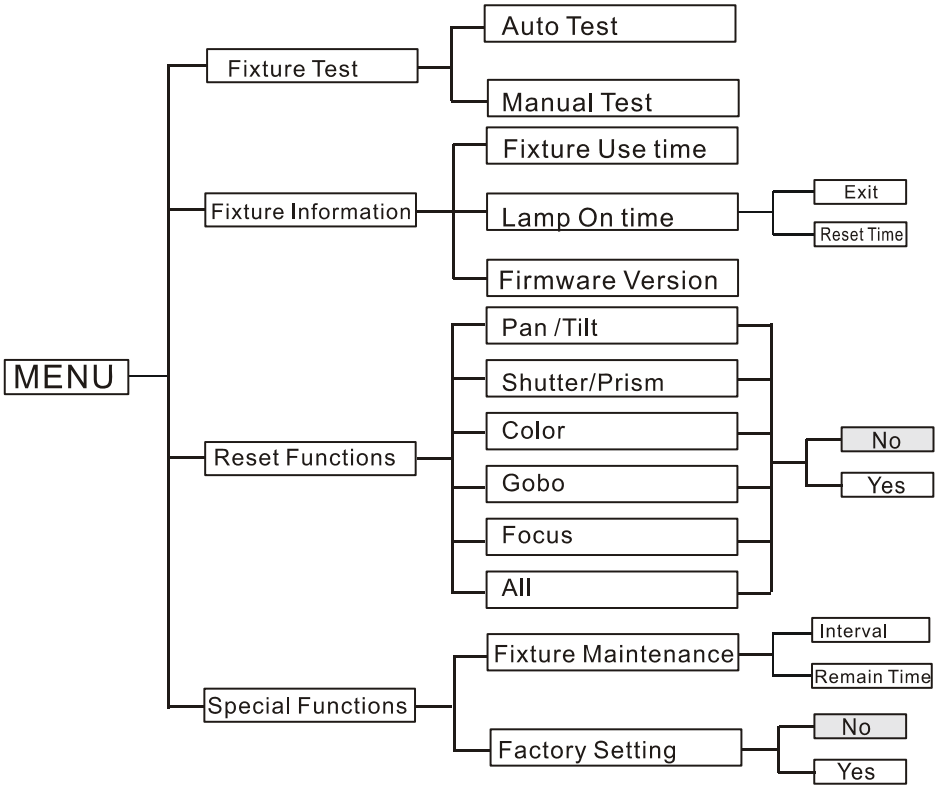
5.1 Main Function

Turn on the unit, press **MENU** button into menu mode, press **UP** and **DOWN** button until the required function is shown on the monitor. Select the function by **ENTER** button. Use **UP** and **DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press **MENU** button or let the unit idle one minute to exit menu mode.

In the event of disconnecting with mains power, press **UP** button for one minute to enter into menu mode. Press MENU button or let the unit idle one minute to exit.

The main functions are shown below（the grayed boxes are preset settings）:


MENU
DMX Functions
DMX Address
001
512
DMX Channel Mode
Mode1(16)
Mode2(14)
View DMX Value
Fixture Setting
Pan Inverse
No
Yes
Tilt Inverse
No
Yes
P/T Feedback
No
Yes
Bl.o. P/T Moving
No
Yes
Bl.o. Color Change
No
Yes
Bl.o. Gobo Change
No
Yes
Lamp Setting
On/Off
Off
On
State/Power On
Off
On
Off via DMX
No
Yes
On if DMX On
No
Yes
Off if DMX Off
No
Yes
Ignition Delay
0~255s
Low Power Delay
0~255s
Display Setting
Display Inverse
No
Yes
Backlight Auto Off
No
Yes
Backlight Intensity
1~10
Contrast Ratio
1~30
Temperature Unit
℃
℉
Display Warning
No
Yes
Language
English
Chinese



DMX Functions

Enter menu mode, select ***DMX Functions***, press ENTER button to confirm, use UP and DOWN button to select ***DMX Address***, ***DMX Channel Mode*** or ***View DMX Value***

DMX Address - *DMX512 address setting*

Select **DMX Address**, press ENTER button to confirm, the present address will blink on the display, use UP and DOWN button to adjust the address from **1** to **512**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

DMX Channel Mode - *channel mode*

Select **DMX Channel Mode**, press ENTER button to confirm, present channel mode will blink on the display, use UP and DOWN button to select **Mode 1 (16)** or **Mode 2 (14)**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

View DMX Value

Select **View DMX Value**, press ENTER button to confirm. Channel function and its value will show on the display, use UP and DOWN button to view other DMX value. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Fixture Setting

Enter menu mode, select ***Fixture Setting,*** press ENTER button to confirm, use UP and DOWN button to select ***Pan Inverse, Tile Inverse, P/T Feedback, BL.O. P/T Moving, BL.O. Color Change or BL.O. Gobo Change.***

Pan Inverse

Select **Pan Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (pan inverse), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Tilt Inverse

Select **Tilt Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal) or **Yes** (tilt inverse), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

P/T Feedback *— pan/tilt Feedback*

Select **P/T Feedback**, press ENTER button to confirm, present mode will blink on the display, press UP/DOWN button to select **No** (Pan or tilt's position will not feedback while out of step.) or **Yes** (Feedback while pan/tilt out of step.), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. P/T Moving *- Blackout while pan/tilt moving*

Select **BL.O. P/T Moving**, Press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal while pan/tilt moving) or **Yes** (blackout while pan/tilt moving), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. Color Change *- Blackout while change color*

Select **BL.O. Color Change**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal while change color) or **Yes** (blackout while change color), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

BL.O. Gobo Change *- Blackout while change gobo*

Select **BL.O. Gobo Change**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal while changing gobo) or **Yes** (blackout while changing gobo), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Lamp Setting

Enter menu mode, select ***Fixture Setting***, press ENTER button to confirm, use UP and DOWN button to select ***On/Off, State/Power on, Off Via DMX, On If DMX on, Off If DMX off*** or ***Ignition Delay*** and ***Low Power Delay.***

On/Off *- Turn on/off the lamp*

Select **On/Off**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **On** (lamp on) or **Off** (lamp off), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

State/Power On *- Lamp state while power on*

Select **State/Power On**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **On** (Lamp on while power on) or **Off** (Lamp off while power on), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Off Via DMX *- Turn off the unit via DMX controller*

Select **Off Via DMX**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Yes** (turn off the unit via DMX controller available) or **No** (turn off the unit via DMX controller impracticable), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

(When you operate the unit via DMX controller, set the value of channel “special function” to “lamp off”, waiting for 5 seconds, then the lamp will be off if you choose “yes” mode).

On If DMX On **-** Lamp turns on when DMX signal is detected

Select **On If DMX On**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Yes** (Lamp turns on when DMX signal is detected) or **No** (keep the present state), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode *(If the lamp is off via DMX signal, you can reconnect the DMX controller to make the lamp on).*

Off If DMX Off **-** Lamp turns off when DMX signal is cut off

Select **Off If DMX Off**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **Yes** (Lamp turns off when DMX signal is cut off), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Ignition Delay - *Delay time between power on and lamp on*

Select **Ignition Delay**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust the delay time from 0S to 255S, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Low Power Delay - *Delay time between power on and lamp on*

Select **Low Power Delay**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust the delay time from 0S to 255S, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Display Setting

Enter menu mode, select ***Display Setting***, press ENTER button to confirm, use UP and DOWN button to select ***Display Inverse, Backlight Auto Off, Backlight Intensity,Contrast Ratio*** or ***Temperature unit, Display Warning*** *and* ***Language.***

Display Inverse

Select **Display Inverse**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (normal display) or **Yes** (inverse display), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Backlight Auto Off

Select **Backlight Auto Off**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (display always on) or **Yes** (display goes off one minute after exiting menu mode), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Backlight Intensity

Select **Backlight Intensity**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust backlight intensity from **1** (dark) to **10** (bright), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Contrast Ratio

Select ***Contrast Ratio***, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to adjust the intensity ratio from **1** (dark) to **30** (bright), press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Temperature Unit

Select **Temperature Unit**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select ℃ or ℉, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Display Warning

Select **Display Warning**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **No** (not show the error warning information) or **Yes** (display will show the error warning when the unit went wrong), press ENTER button to store.

Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Language

Select **Language**, press ENTER button to confirm, present mode will blink on the display, use UP and DOWN button to select **English** or **Chinese**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Fixture Test

Enter menu mode, select ***Fixture Test***, press ENTER button to confirm, use UP and DOWN button to select ***Auto Test*** or ***Manual Test***

Auto Test

Select **Auto Test**, press ENTER button to confirm, the unit will run built-in programs to automatically test pan, tilt, color, gobo, gobo rotation, shutter, dimmer, prism, prism rotation, focus, and lamp on/off. . Press MENU button back to the last menu or exit menu mode after auto test.

Manual Test

Select **Manual Test**, press ENTER button to confirm, the present channel will show on the display, use Up and DOWN button to select channel, press ENTER button to confirm, then use UP and DOWN button to adjust the value, press ENTER button to store, the fixture will run as the channel value indicates. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.

(All channels value will become 0 after exiting Manual Test menu)

Fixture Information

Enter menu mode, select ***Fixture Information***, press ENTER button to confirm, use UP and DOWN button to select ***Fixture use time, Lamp On time*** or ***Firmware Version.***

Fixture use time

Select **Fixture use time**, press ENTER button to confirm, fixture use time will show on the display, press MENU button to exit.

Lamp On time

Select **Lamp On time**, press ENTER button to confirm, lamp on time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or **Reset Time**, press ENTER button to confirm. Press MENU button back to the last menu or exit menu mode let the unit idle one minute.

Firmware Version

Select **Firmware Version**, press ENTER button to confirm, firmware version will show on the display, press MENU button back to exit.

Reset Functions

Enter menu mode, select ***Reset Function***, press ENTER button to confirm, use UP and DOWN button to select ***Pan/Tilt, Shutter/Prism, Color, Gobo, Focus*** or ***All.***

Pan/Tilt - *Reset Pan/Tilt*

Select **Pan/Tilt**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset pan and tilt to their home positions) or **No**, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Shutter/Prism - *Reset Shutter/ Prism*

Select **Shutter/Prism**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset shutter and prism to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

Color - *Reset Color*

Select **Color**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset color to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

Gobo - *Reset Gobo*

Select **Gobo**, press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset GOBO wheel to their home positions) or **No**, press ENTER

button to store. Press MENU button to exit.

Focus *- Reset Focus*

Select **Focus,** press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset Focus to their home positions) or **No**, and press ENTER button to store. Press MENU button to exit

All *- Reset All*

Select **All,** press ENTER button to confirm, use UP and DOWN button to select **Yes** (the unit will run built-in program to reset all motors to their home positions) or **No**, press ENTER button to store. Press MENU button to exit.

Special Functions

Enter menu mode, select ***Special Functions***, press ENTER button to confirm, select **Fixture Maintenance** or ***Factory Setting.***

Fixture Maintenance

Select **Fixture Maintenance**, press ENTER button to confirm, use UP and DOWN button to select **Interval** or **Remain Time**.

Interval

Select **Interval,** press ENTER button to confirm, the interval time will show on the display. Press MENU button to exit.

Remain Time

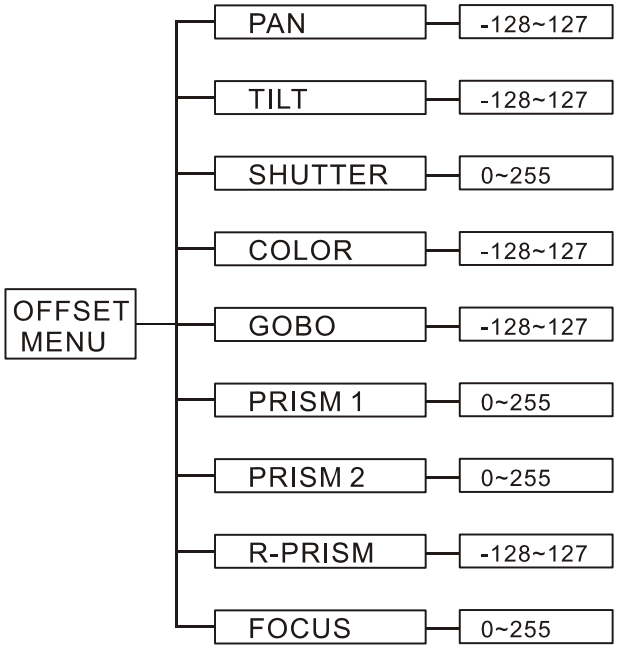
Select **Remain Time,** press ENTER button to confirm, the remaining time will show on the display, press ENTER button to confirm, use UP and DOWN button to select **Exit** or **Reset time**, press MENU button to exit.

Factory Setting

Select **Factory Setting**, press ENTER button to confirm, use UP and DOWN button to select **No** (keep the present setting) or **Yes** (the fixture will reset to factory settings and exit menu mode).

5.2 Home Position Adjustment

Press **MENU** button into menu mode, then press ENTER button for about 3 seconds into offset mode to adjust the home position. Select the function by **ENTER** button. Use **UP** and **DOWN** button to choose the submenu, press the **ENTER** button to store and automatically return to the last menu. Press MENU button to exit.



PAN *- pan home position adjustment*

Enter offset mode, Select **PAN**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

TILT *- Tilt home position adjustment*

Enter offset mode, Select **TILT**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

SHUTTER *- Shutter home position adjustment*

Enter offset mode, Select **SHUTTER**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from 0 to 255, press ENTER button to store. Press MENU button to exit.

COLOR **-** *Color home position adjustment*

Enter offset mode, Select **COLOR**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

GOBO **-** *Gobo home position adjustment*

Enter offset mode, Select **GOBO**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

PRISM 1 **–** *Prism 1 rotation home position adjustment*

Enter offset mode, Select **PRISM 1**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

PRISM 2 **–** *Prism 2 home position adjustment*

Enter offset mode, Select **PRISM 2**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from 0 to 255, press ENTER button to store. Press MENU button to exit.

R-PRISM **–** *Prism1 rotation home position adjustment*

Enter offset mode, Select **R-PRISM**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from -128 to 127, press ENTER button to store. Press MENU button to exit.

FOCUS **-** *Focus home position adjustment*

Enter offset mode, Select **FOCUS**, press ENTER button to confirm, the present position will blink on the display, use UP and DOWN button to offset the value from 0 to 255, press ENTER button to store. Press MENU button to exit.

5.3 Error Information

Lamp Startup Fail

It appears when there is no lamp or some wires are damaged.

Temperature Sense Error

It appears when temperature check board is damaged.

Lamp Too Hot Power Off

It appears when temperature is detected higher than 110℃. Check if the unit is properly ventilated, or fans or temperature check board may is damaged.

Lamp Too Hot Low Power

It appears when temperature is detected higher than 105℃, the unit will run on a low power level.

Maintenance Fixture

It appears when the maintenance remaining time becomes 0S, please enter menu mode and reset the time.

Lamp On Over 700 Hour

It appears when the lamp has been on over 700 hours, please turn off the lamp.

Memory Initial Fail

It appears when the memory IC is damaged.

CPU-B Error, CPU-C Error, CPU-D Error

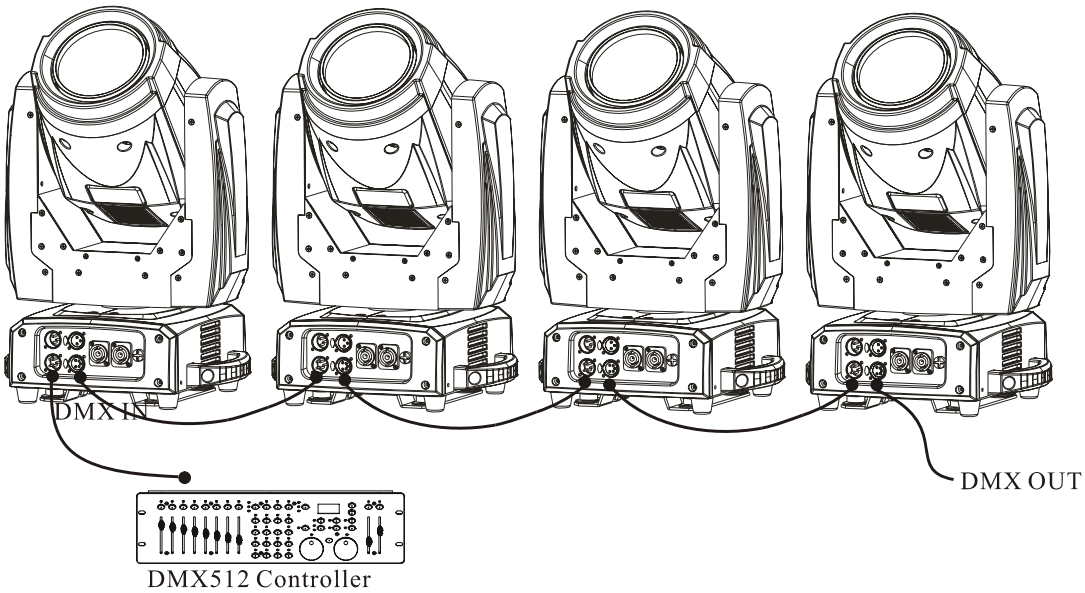
They appear when board P.C or some wires are damaged.

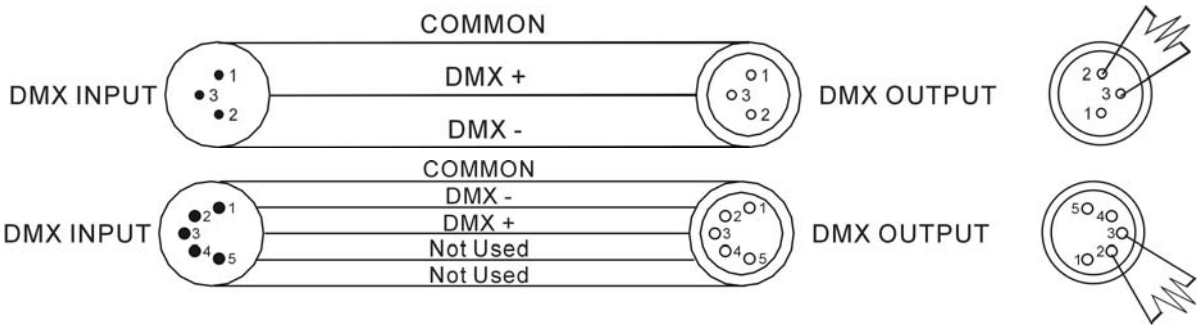
Pan Reset Error, Pan Encode Error, Tilt Reset Error, Tilt Encode Error, Shutter Reset Fail, Dimmer Reset Fail, Color Reset Fail, Gobo Reset Fail, Focus Reset fail.

They may appear when turning on or resetting the unit, for some parts such as board P.C are damaged. Please contact the qualified maintenance.

6. Control By Universal DMX Controller

6.1 Connection





1. At last unit, the DMX cable has to be terminated with a terminator. Solder a 120-ohm 1⁄4W resistor between pin 2(DMX-) and pin 3(DMX+) into a 3-pin XLR-plug and plug it in the DMX-output of the last unit.
2. Connect the unit together in a “daisy chain” by XLR plug cable from the output of the unit to the input of the next unit. The cable cannot be branched or split to a “Y” cable. DMX 512 is a very high-speed signal. Inadequate or damaged cables, soldered joints or corroded connectors can easily distort the signal and shut down the system.
3. The DMX output and input connectors are pass-through to maintain the DMX circuit, when one of the units’ power is disconnected.
4. Each lighting unit needs to have a DMX address to receive the data by the controller. The address number is between 0-511 (usually 0 & 1 are equal to 1).
5. The end of the DMX 512 system should be terminated to reduce signal errors.

6. 3 pin XLR connectors are more popular than 5 pins XLR.

3 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+)

5 pin XLR: Pin 1: GND, Pin 2: Negative signal (-), Pin 3: Positive signal (+), Pin4, Pin5 not used.

6.2 Channel Mode Setting

Enter menu mode, select ***DMX Functions***, press ENTER button to confirm, use UP and DOWN button to select **DMX Channel Mode**, press ENTER button to confirm, present channel mode will blink on the display, use UP and DOWN button to select **Mode 1 (16)** or **Mode 2 (14)** channel Mode, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

6.3 Address Setting

If you use a universal DMX controller to control the units, you have to set DMX address from 1 to 512 so that the units can receive DMX signal.

Press MENU button to enter menu mode, select ***DMX Functions***, press ENTER button to confirm, use UP and DOWN button to select ***DMX Address***, press ENTER button to confirm, the present address will blink on the display, use UP and DOWN button to adjust the address from 1 to 512, press ENTER button to store. Press MENU button back to the last menu or let the unit idle one minute to exit menu mode.

Please refer to the following diagram to address your DMX512 channel for the first 4 units.

Channel mode	Unit 1 Address	Unit 2 Address	Unit 3 Address	Unit 4 Address
16 channels	1	17	33	49
14 channels	1	15	29	43

6.4 DMX 512 Configuration

16 Channels Mode:

16 Channels(Mode 1)

Ch1	Ch2	Ch3	Ch4	Ch5	Ch6
Pan	Pan Fine	Tilt	Tilt Fine	P/T Speed	Special Functions
255 ┌ 540° 0 └ 0°	255 ┌ 0 └	255 ┌ 270° 0 └ 0°	255 ┌ 0 └	255 ┌ Slow 0 └ Fast	240-255 Open 230-239 Lamp Off 220-229 Disable blackout while P/T moving, or Color/Gobo changing 210-219 Enable blackout while P/T moving, or Color/Gobo changing 200-209 Reset All 190-199 Focus Reset 180-189 No Function 170-179 Shutter/Prism Reset 160-169 Gobo Reset 150-159 Color Reset 140-149 Pan/Tilt Reset 130-139 Lamp On 120-129 Disable blackout while Gobo changing 110-119 Enable blackout while Gobo changing 100-109 Disable blackout while Color changing 090-099 Enable blackout while Color changing 080-089 Disable blackout while P/T moving 070-079 Enable blackout while P/T moving 060-069 P/T normal Mode 050-059 P/T fast Mode 040-049 Dimmer linear Mode 030-039 Dimmer conventional Mode 000-029 Open

Ch7	Ch8	Ch9	Ch10
P/T Macro	P/T Macro Speed	Color	Gobo
248-255 Macro 31 240-247 Macro 30 232-239 Macro 29 224-231 Macro 28 216-223 Macro 27 208-215 Macro 26 200-207 Macro 25 192-199 Macro 24 184-191 Macro 23 176-183 Macro 22 168-175 Macro 21 160-167 Macro 20 152-159 Macro 19 144-151 Macro 18 136-143 Macro 17 128-135 Macro 16 120-127 Macro 15 112-119 Macro 14 104-111 Macro 13 096-103 Macro 12 088-095 Macro 11 080-087 Macro 10 072-079 Macro 9 064-071 Macro 8 056-063 Macro 7 048-055 Macro 6 040-047 Macro 5 032-039 Macro 4 024-031 Macro 3 016-023 Macro 2 008-015 Macro 1 000-007 Off	255 ┌ Slow 0 └ Fast	255 Rotation Fast 194 Rotation Slow 190-193 Stop 189 Rotation Slow 128 Rotation Fast 064-127 Color Index 061-063 Color 14 + White 059-060 Color 14 057-058 Color 13 + Color 14 055-056 Color 13 053-054 Color 12 + Color 13 051-052 Color 12 049-050 Color 11 + Color 12 047-048 Color 11 045-046 Color 10 + Color 11 043-044 Color 10 040-042 Color 9 + Color 10 038-039 Color 9 036-037 Color 8 + Color 9 034-035 Color 8 032-033 Color 7 + Color 8 030-031 Color 7 028-029 Color 6 + Color 7 026-027 Color 6 024-025 Color 5 + Color 6 022-023 Color 5 019-021 Color 4 + Color 5 017-018 Color 4 015-016 Color 3 + Color 4 013-014 Color 3 011-012 Color 2 + Color 3 009-010 Color 2 007-008 Color 1 + Color 2 005-006 Color 1 003-004 White + Color 1 000-002 White	255 Rotation Fast 194 Rotation Slow 190-193 Stop 189 Rotation Slow 128 Rotation Fast 124-127 Gobo 17 Shaking 120-123 Gobo 16 Shaking 116-119 Gobo 15 Shaking 112-115 Gobo 14 Shaking 108-111 Gobo 13 Shaking 104-107 Gobo 12 Shaking 100-103 Gobo 11 Shaking 096-099 Gobo 10 Shaking 092-095 Gobo 9 Shaking 088-091 Gobo 8 Shaking 084-087 Gobo 7 Shaking 080-083 Gobo 6 Shaking 076-079 Gobo 5 Shaking 072-075 Gobo 4 Shaking 068-071 Gobo 3 Shaking 064-067 Gobo 2 Shaking 060-063 Gobo 1 Shaking 056-059 Open Shaking 052-055 Gobo 17 049-051 Gobo 16 046-048 Gobo 15 043-045 Gobo 14 040-042 Gobo 13 037-039 Gobo 12 034-036 Gobo 11 031-033 Gobo 10 028-030 Gobo 9 025-027 Gobo 8 022-024 Gobo 7 019-021 Gobo 6 016-018 Gobo 5 013-015 Gobo 4 010-012 Gobo 3 007-009 Gobo 2 004-006 Gobo 1 000-003 Open

16 Channels(Mode 1)

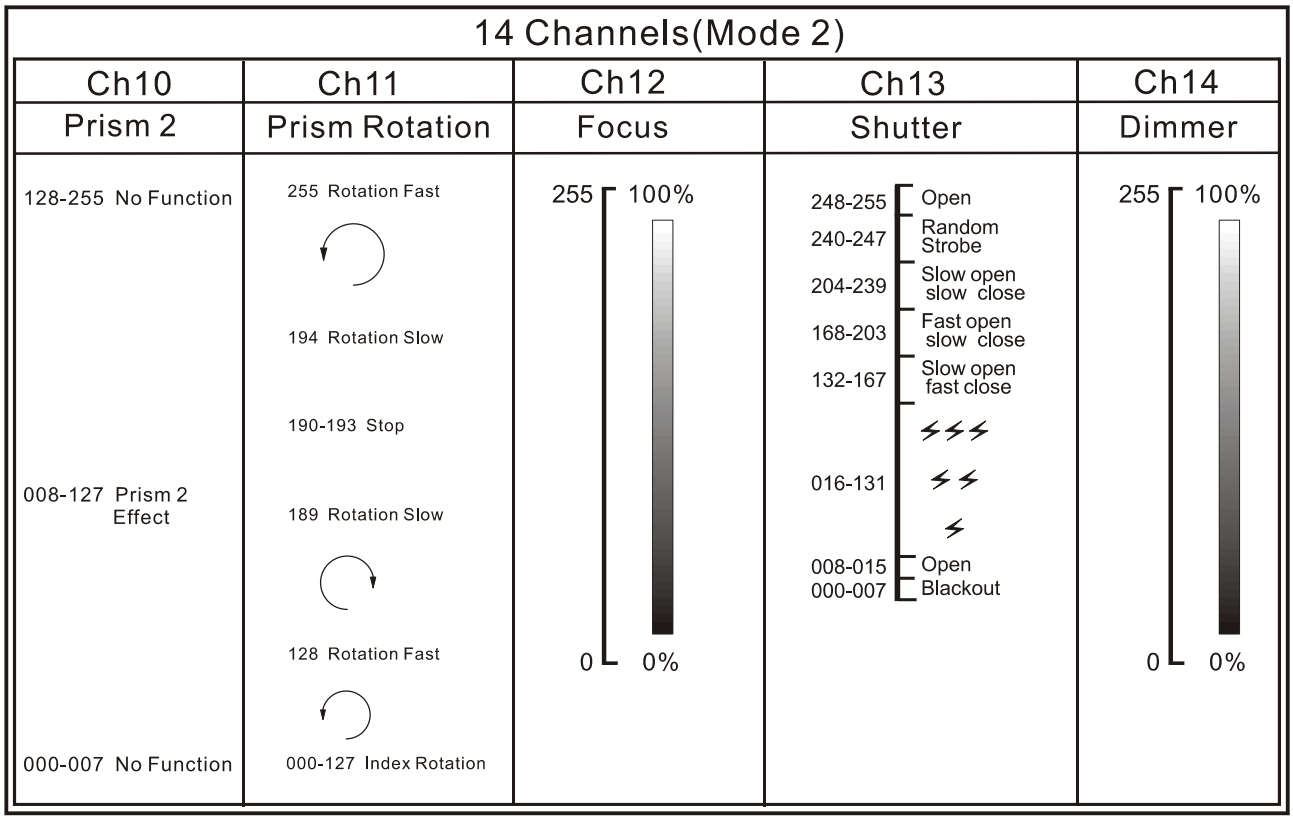
Ch11	Ch12	Ch13	Ch14	Ch15	Ch16
Prism 1	Prism 2	Prism Rotation	Focus	Shutter	Dimmer
251-255 Rotation Effect 28 247-250 Rotation Effect 27 242-246 Rotation Effect 26 237-241 Rotation Effect 25 233-236 Rotation Effect 24 228-232 Rotation Effect 23 224-227 Rotation Effect 22 219-223 Rotation Effect 21 215-218 Rotation Effect 20 210-214 Rotation Effect 19 206-209 Rotation Effect 18 201-205 Rotation Effect 17 197-200 Rotation Effect 16 192-196 Rotation Effect 15 188-191 Rotation Effect 14 183-187 Rotation Effect 13 178-182 Rotation Effect 12 174-177 Rotation Effect 11 169-173 Rotation Effect 10 165-168 Rotation Effect 9 160-164 Rotation Effect 8 156-159 Rotation Effect 7 151-155 Rotation Effect 6 147-150 Rotation Effect 5 142-146 Rotation Effect 4 138-141 Rotation Effect 3 133-137 Rotation Effect 2 128-132 Rotation Effect 1 008-127 Prism 1 Effect 000-007 No Function	128-255 No Function 008-127 Prism 2 Effect 000-007 No Function	255 Rotation Fast 194 Rotation Slow 190-193 Stop 189 Rotation Slow 128 Rotation Fast 000-127 Index Rotation	255 100% 0 0%	248-255 Open 240-247 Random Strobe 204-239 Slow open slow close 168-203 Fast open slow close 132-167 Slow open fast close 016-131 008-015 Open 000-007 Blackout	255 100% 0 0%

14 Channels Mode:

14 Channels(Mode 2)

Ch1	Ch2	Ch3	Ch4	Ch5
Pan	Tilt	P/T Speed	Special Functions	P/T Macro
255 ┌ 540° 0 └ 0°	255 ┌ 270° 0 └ 0°	255 ┌ Slow 0 └ Fast	240-255 Open 230-239 Lamp Off 220-229 Disable blackout while P/T moving, or Color/Gobo changing 210-219 Enable blackout while P/T moving, or Color/Gobo changing 200-209 Reset All 190-199 Focus Reset 180-189 No Function 170-179 Shutter/Prism Reset 160-169 Gobo Reset 150-159 Color Reset 140-149 Pan/Tilt Reset 130-139 Lamp On 120-129 Disable blackout while Gobo changing 110-119 Enable blackout while Gobo changing 100-109 Disable blackout while Color changing 090-099 Enable blackout while Color changing 080-089 Disable blackout while P/T moving 070-079 Enable blackout while P/T moving 060-069 P/T normal Mode 050-059 P/T fast Mode 040-049 Dimmer linear Mode 030-039 Dimmer conventional Mode 000-029 Open	248-255 Macro 31 240-247 Macro 30 232-239 Macro 29 224-231 Macro 28 216-223 Macro 27 208-215 Macro 26 200-207 Macro 25 192-199 Macro 24 184-191 Macro 23 176-183 Macro 22 168-175 Macro 21 160-167 Macro 20 152-159 Macro 19 144-151 Macro 18 136-143 Macro 17 128-135 Macro 16 120-127 Macro 15 112-119 Macro 14 104-111 Macro 13 096-103 Macro 12 088-095 Macro 11 080-087 Macro 10 072-079 Macro 9 064-071 Macro 8 056-063 Macro 7 048-055 Macro 6 040-047 Macro 5 032-039 Macro 4 024-031 Macro 3 016-023 Macro 2 008-015 Macro 1 000-007 Off

Ch6	Ch7	Ch8	Ch9
P/T Macro Speed	Color	Gobo	Prism 1
255 ┌ Slow 0 └ Fast	255 Rotation Fast 194 Rotation Slow 190-193 Stop 189 Rotation Slow 128 Rotation Fast 064-127 Color Index 061-063 Color 14 + White 059-060 Color 14 057-058 Color 13 + Color 14 055-056 Color 13 053-054 Color 12 + Color 13 051-052 Color 12 049-050 Color 11 + Color 12 047-048 Color 11 045-046 Color 10 + Color 11 043-044 Color 10 040-042 Color 9 + Color 10 038-039 Color 9 036-037 Color 8 + Color 9 034-035 Color 8 032-033 Color 7 + Color 8 030-031 Color 7 028-029 Color 6 + Color 7 026-027 Color 6 024-025 Color 5 + Color 6 022-023 Color 5 019-021 Color 4 + Color 5 017-018 Color 4 015-016 Color 3 + Color 4 013-014 Color 3 011-012 Color 2 + Color 3 009-010 Color 2 007-008 Color 1 + Color 2 005-006 Color 1 003-004 White + Color 1 000-002 White	255 Rotation Fast 194 Rotation Slow 190-193 Stop 189 Rotation Slow 128 Rotation Fast 124-127 Gobo 17 Shaking 120-123 Gobo 16 Shaking 116-119 Gobo 15 Shaking 112-115 Gobo 14 Shaking 108-111 Gobo 13 Shaking 104-107 Gobo 12 Shaking 100-103 Gobo 11 Shaking 096-099 Gobo 10 Shaking 092-095 Gobo 9 Shaking 088-091 Gobo 8 Shaking 084-087 Gobo 7 Shaking 080-083 Gobo 6 Shaking 076-079 Gobo 5 Shaking 072-075 Gobo 4 Shaking 068-071 Gobo 3 Shaking 064-067 Gobo 2 Shaking 060-063 Gobo 1 Shaking 056-059 Open Shaking 052-055 Gobo 17 049-051 Gobo 16 046-048 Gobo 15 043-045 Gobo 14 040-042 Gobo 13 037-039 Gobo 12 034-036 Gobo 11 031-033 Gobo 10 028-030 Gobo 9 025-027 Gobo 8 022-024 Gobo 7 019-021 Gobo 6 016-018 Gobo 5 013-015 Gobo 4 010-012 Gobo 3 007-009 Gobo 2 004-006 Gobo 1 000-003 Open	251-255 Rotation Effect 28 247-250 Rotation Effect 27 242-246 Rotation Effect 26 237-241 Rotation Effect 25 233-236 Rotation Effect 24 228-232 Rotation Effect 23 224-227 Rotation Effect 22 219-223 Rotation Effect 21 215-218 Rotation Effect 20 210-214 Rotation Effect 19 206-209 Rotation Effect 18 201-205 Rotation Effect 17 197-200 Rotation Effect 16 192-196 Rotation Effect 15 188-191 Rotation Effect 14 183-187 Rotation Effect 13 178-182 Rotation Effect 12 174-177 Rotation Effect 11 169-173 Rotation Effect 10 165-168 Rotation Effect 9 160-164 Rotation Effect 8 156-159 Rotation Effect 7 151-155 Rotation Effect 6 147-150 Rotation Effect 5 142-146 Rotation Effect 4 138-141 Rotation Effect 3 133-137 Rotation Effect 2 128-132 Rotation Effect 1 008-127 Prism 1 Effect 000-007 No Function



7. Troubleshooting

Following are a few common problems that may occur during operation. Here are some suggestions for easy troubleshooting:

A. The unit does not work, no light and the fan does not work

1. Check the connect power and main fuse.
2. Measure the mains voltage on the main connector.
3. Check the power on LED to see if it can be light up or not.

B. Not responding to DMX controller

1. DMX LED should be on. If not, check DMX connectors, cables to see if they are linked properly.
2. If the DMX LED is on and no response to the channel, check the address settings and DMX polarity.
3. If you have intermittent DMX signal problems, check the pins on connectors or on PCB of the

unit or the previous one.

4. Try to use another DMX controller.
5. Check to see if the DMX cables run near or run alongside high voltage cables that may cause damage or interference to DMX interface circuit.

C. One of the channels is not working well

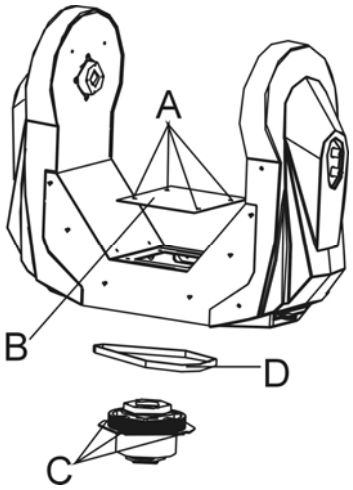
1. The stepper motor might be damaged or the cable connected to the PCB is broken.
2. The motor's drive IC on the PCB might be out of condition.

D. The lamp is cutting out intermittently

1. The lamp is not working well. Check the mains voltage either too high or too low.
2. Internal temperature may be too high. Check if replacement of fan is needed on the head.

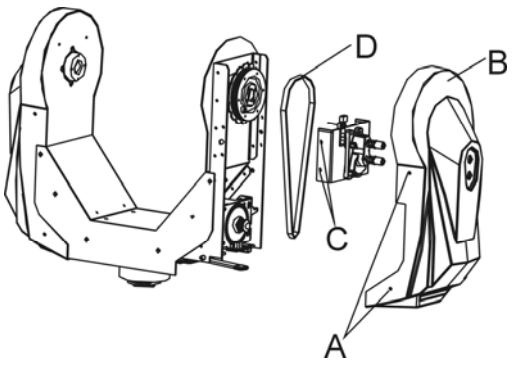
E. If The pan belt is broken

1. Turn off the mains power.
2. Loosen the screws (A), open the cover (B).
3. Loosen the screws (C).
4. Unplug all the connect wires over the belt.
5. Change a new belt (D), put the belt around the axis gear and motor gear.
6. Plug all the connect wires back upon the belt.
7. Tighten all the screws.



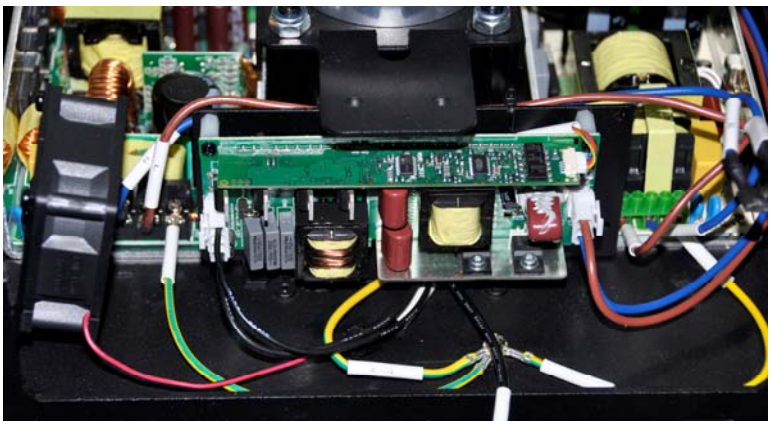
F. If The tilt belt is broken

1. Turn off the mains power.
2. Loosen all the screws (A) and open the right arm cover (B).
3. Loosen the screws (C) that fix the bridge.
4. Change a new belt (D). Please adjust the tension of the belt properly. Note: do not fix the belt too tight as it is can easily rupture.
5. Reverse the procedures from step 3 to 2.



8. Maintenance and Cleaning

Maintenance:



Ballast

A. As the pictures shown above, please replace the cable or cable joints immediately once they've turned yellow.

B. Do maintain the fixtures every two months and make sure that all the screws and terminals have been locked firmly to make sure the normal performance of the fixtures. Negligence of maintenance would cause malfunction of the fixture.

Cleaning:

The cleaning of internal and external optical lenses and/or mirrors must be carried out periodically to optimize light output. Cleaning frequency depends on the environment in which the fixture operates: damp, smoky or particularly dirty surrounding can cause greater accumulation of dirt on the unit's optics.

- Clean with soft cloth and use normal glass to clean fluid.
- Always dry the parts carefully.
- Clean the external optics at least every 20 days. Clean the internal optics at least every 30/60 days.

Declaration of Conformity

We declare that our products (lighting equipments) comply with the following specification and bears CE mark in accordance with the provision of the Electromagnetic Compatibility (EMC) Directive 89/336/EEC.

EN55103-1: 2009 ; EN55103-2: 2009; EN62471: 2008;
EN61000-3-2: 2006 + A1:2009 + A2:2009; EN61000-3-3: 2008.

&

Harmonized Standard

EN 60598-1:2008 + All:2009; EN 60598-2-17:1989 + A2:1991; EN 62471:2008; EN 62493: 2010
Safety of household and similar electrical appliances
Part 1: General requirements

Innovation, Quality, Performance